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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/684,325

10/10/2003

Andrew Patrick Baird

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EXAMINER

LEE, BENNY T

ART UNIT

PAPER NUMBER

2817

DATE MAILED: 08/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
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FILED DATE:

10/684,325

☒ This application has been examined ☒ Responsive to communication filed on 15 March 2004 ☒ This action is made final.

A shortened statutory period for response to this action is set to expire Three (3) month(s), Days from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-11 are pending in the application.
Of the above, claims _____ are withdrawn from consideration.
2. ☐ Claims _____ have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☒ Claims 1-10, 11 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).
12. ☒ Acknowledgement is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received
☒ been filed in parent application, serial no. 980724 filed on 29 May 2002
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

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If applicant desires priority under 35 U.S.C. 120 based upon a previously filed application, specific reference to the earlier filed application must be made in the instant application. For benefit claims under 35 U.S.C. 120, 121 or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of the applications. This should appear as the first sentence of the specification following the title, preferably as a separate paragraph unless it appears in an application data sheet. The status of nonprovisional parent application(s) (whether patented or abandoned) should also be included. If a parent application has become a patent, the expression "now Patent No. _____" should follow the filing date of the parent application. If a parent application has become abandoned, the expression "now abandoned" should follow the filing date of the parent application.

If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or

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120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A priority claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed claim for priority under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

The disclosure is objected to because of the following informalities: Note that subheadings should be provided to delineate the different sections of the specification. Page 2, line 29 and page 11, line 17, note that "Firstly" should be rewritten as -- First --. Page 3, line 33, note that "... more easily cast than a thin plate" is vague in meaning and should be rephrased for clarity. Pages 4, 5, 7, at all occurrences therein, note that "said" should be rewritten as -- the --. Page 8, lines 37, and page 14, line 15: note that -- 15 -- should precede "b" and "c" respectively. Page 11, line 4, should "bevelled" be correctly spelled as -- beveled --?; line 26, note that "on the contrary" should be rephrased for a proper characterization; line 37, note that "position 38" appears to be depicted only in -- Fig. 4 -- rather than "Figs. 1 and 4". Page 12, line 9, note that "Figs.

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4 and 5" should be -- Figs. 4 and 5a-5c-- for consistency with the drawing figures; lines 16, 17, note that -- (see Fig. 4) -- should follow "42" for clarity. Page 14, line 7, note that -- of Fig. 12 -- should follow "c", line 15, note that -- of Fig. 14 -- should follow "c".

Appropriate correction is required.

The disclosure is objected to because of the following informalities: Note that the following reference labels need description in the specification relative to the corresponding figures Fig. 1 (36); Figs. 1-3 (43); Fig. 2 (30); Figs. 2, 3 (20); Fig. 4 (28, 30, 40, a, b, c); Figs. 5a-5c, 15a-15c, 16 (14); Figs. 9, 12, 13a-13c, all reference labels therein Fig. 15a (E1, E2); Figs. 15b, 15c (40); Fig. 16 (18, 32); Fig. 18, in its entirety.

Appropriate correction is required.

The drawings are objected to because of the following: In Figs. 2 and 3, note that -- cover 34 -- needs to be depicted; In fig. 4, note that section lines --5A, 5B, 5C -- need to be labeled and reference labels (22, 43) need to be provided. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claims 1-9, 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, last paragraph, note that it is unclear which polarization (i.e. first or second) is intended by the recitation of "the incident polarization".

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In claim 2, note that it is unclear what characterizes the "protrusion being located into the short circuit". Note that use of the "further" modifier that renders the remainder of the claim vague and indefinite.

In claims 5, 6, 7, note that reference to "the wedge-shaped protrusion" or "the wedge" respectively lack strict antecedent basis in claim 1.

In claim 10, note that "said waveguide cavity" lacks strict antecedent basis. Also, note that it is unclear what characterizes "the width of the waveguide" (also see claim 5).

The following claims have been found objectionable for reasons set forth below:

In claims 1, 11, note that "in the same longitudinal plane" should be rephrased as -- along a common longitudinal plane -- for a better characterization.

In claim 1, line 3, note that --the-- should follow "which". Moreover, note that the "(first second) polarized signal" should be defined as being related to appropriate ones of the "at least two orthogonally polarized signals" for clarity of description. Also at appropriate occurrences, -- said common longitudinal axis -- is suggested. In line 20 "and" should be deleted and in line 21 "said" should be deleted; In line 23, note that "the" should be rewritten as --a recombined--.

In claims 10, 11, note that "a polarized signal" should be rephrased as --an incident signal-- for consistency of description.

In claim 10, note that "a protrusion in a waveguide" should be rephrased as --a protrusion in the waveguide-- and "whereby said recombined" should be --whereby a recombined-- for clarity of description.

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In claim 11, note that "it" should be rewritten to indicate the intended feature.

Also note that "the recombined" should be a recombined-- and "same" should be

⁻common⁻ for consistency of description..
^ ^

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 5; 10 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by the International ('857) publication (of record in the parent application).

The International ('857) publication in Fig. 1 thereof discloses a circular waveguide (14) having a first probe is a signal isolation post (22) extending from the waveguide wall which reflects the signals (V1) back to probe (20) while passing orthogonally polarized signals (V2). A second probe (24) is located downstream of isolator (24). A polarization rotating plate is located adjacent to a short circuit end (32) of the wave guide such that polarization signal (V2) is reflected off by short circuit (32) along with a 90 degree polarization so as to be able to be received at probe (24). The polarization rotating plate (30) includes a protruding surface bounded by leading edge (34a) and extending partly across the wave-guide towards the short circuit end. In operation, note that edges (34a, 34b) of plate (30) causes a partial reflection of signal (V2) while another portion of signal (V2) can pass through the polarization rotating plate (30), reflect off the short circuit end (32) and be rotated 90 degrees. The two reflected and rotated signals are then recombined (see page 8) to be received at probe (24).

Moreover, as described at page 9, the distances of the edges can be selected such as to be frequency dependent and thus this selection of distance inherently provides cut-off for certain frequencies. Note from fig. 4 that as an alternative to the stepped plate of fig. 1 a wedge shape plate (fig. 4E) would have been usable. Such wedge shape plate narrowing to a common location or point at the waveguide wall (16).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over the International ('857) publication in view of Hirota et al (both of record in the parent application).

As disclosed in Fig. 1 of the ('857) publication, a low noise block (i.e. LNB, 10) is described and which includes feedhorn (18) coupled to waveguide (14) at aperture (16).

Also an enclosure (shown in phantom) contains and supports the LNB circuitry as well as coupling with probes (20, 24). The ('857) publication differs from the claimed invention in that a printed circuit board for supporting the LNB circuitry is not explicitly disclosed.

Hirota et al (figs. 1a-1c) discloses a circuit board (4) having probes (5, 7) coupled thereto for receiving orthogonally polarized signals, which can be processed by circuitry on the circuit board (4). Also as evident from fig. 3, such circuit board is enclosed in a shielded chassis and cover to form an enclosure.

Accordingly, it would have been obvious to have configured the LNB circuitry within the housing of the ('857) publication to have included a circuit board therein as taught by Hirota et al. As is evident from Hirota et al, circuit boards for supporting LNB processing circuitry and orthogonal probes are conventional within this same field of endeavor, thereby suggesting the obviousness of such a combination.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tsukada (fig. 7) discloses a reflector and polarization rotator (7, 8"). King et al pertains to a polarizer similar to the ('857) publication.

This is a continuation of applicant's earlier Application No. 980724. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL**

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even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to Benny T. Lee at telephone number (571)-272-1764.

Lee/ds

07/14/04

A handwritten signature in black ink that reads "Benny Lee". The signature is written in a cursive, flowing style.

BENNY T. LEE
PRIMARY EXAMINER
ART UNIT 2817